**JURY’S RECOMMENDATIONS ON JINR PRIZES FOR 2017**

**I. Theoretical physics research**

First Prizes

1. “Pseudotoric structures: Lagrangian tori and Lagrangian fibrations”.

Author: N. Tyurin.

2. “Spin dynamics in arbitrarty gravitational and electromagnetic fields”.

Authors: Yu. Obukhov, A. Silenko, O. Teryaev.

3. “Strong electron correlations in underdoped high-temperature superconductors”.

Authors: A. Ferraz, I. Ivantsov, E. Kochetov, M. Maśka, M. Mierzejewski.

**II. Experimental physics research**

First Prize

“Delayed neutron emission of exotic nuclei”.

Authors: D. Testov, Yu. Penionzhkevich, E. Sokol, E. Kuznetsova, V. Smirnov, M. Ivanov, A. Severyukhin, D. Verney, F. Ibrahim.

Second Prize

“Search for 2p decay of the first excited state of 17Ne(3/2−)”.

Authors: A. Bezbakh, R. Wolski, M. Golovkov, S. Krupko, Yu. Parfenova, S. Sidorchuk, R. Slepnev, G. Ter-Akopian, A. Fomichev, P. Sharov.

**III. Physics instruments and methods**

First Prize

“Development and construction of gas-filled detectors based on a new type of straw tubes for operation in vacuum into a track spectrometer of the NA62 experimental set-up”.

Authors: L. Glonti, H. Danielsson, T. Enik, V. Kekelidze, A. Kolesnikov, D. Madigozhin, S. Movchan, Yu. Potrebenikov, V. Samsonov, S. Shkarovskiy.

Second Prize

“Structure of deterministic mass, surface and multiphase fractals: theory and methods of analysing the intensity of small-angle scattering”.

Authors: A. Cherny, E. Anitas, V. Osipov, A. Kuklin, M. Balasoiu.

**IV. Applied physics research**

First Prizes

1. “Development and construction of the permanent magnet ECR ion source, DECRIS-PM, for the DC-280 cyclotron”.

Authors: V. Bekhterev, S. Bogomolov, A. Bondarchenko, A. Efremov, K. Kuzmenkov, A. Lebedev, V. Loginov, V. Mironov, N. Yazvitsky, N. Konev.

2. “Construction of a facility for assembling and testing superconducting magnets, investigation of the characteristics of magnets”.

Authors: N. Agapov, V. Borisov, A. Galimov, A. Donyagin, V. Karpinskiy, V. Kekelidze, S. Kostromin, D. Nikiforov, G. Trubnikov, H. Khodzhibagiyan.

**Encouraging prizes**

1. “Study of ultracold neutron diffraction by a moving grating”.

Authors: G. Kulin, A. Frank, S. Goryunov, D. Kustov, A. Bushuyev, P. Geltenbort, M. Jentschel, A. Panzarella.

2. “Determination of the decay time of scintillators and investigation of space correlation of nuclear radiation by the autocorrelation method”.

Authors: V. Morozov, N. Morozova, V. Zlokazov.

3. “Investigation of the nonlinear dynamics of waves in the terahertz frequency range in condensed media and living systems”.

Author: A. Bugay.

4. “Monte-Carlo simulation of neutron spectrometers and neutron scattering experiments”.

Authors: A. Belushkin, S. Manoshin, V. Bodnarchuk, A. Joffe.